US-PAT-NO: 5397192

DOCUMENT-IDENTIFIER: US 5397192 A

TITLE: Shuttle-type printers and methods for operating
same

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Brief Summary Text - BSTX (8):
   Another problem relates to printer versatility. Printers are often
called
upon to print on a wide variety of recording media having different
widths and
printing surfaces. Common recording media include standard
81/2.times.11 inch
paper, A4 paper, and B4 paper. Additionally, printers are increasingly
used to
print bar codes or other information on narrow, adhesive-backed labels.
 Prior
art printers detect various paper size using complex media feed sensors
provided in the printer throat, or by sensing the type of tray used to
store
the media that is inserted into the printer. It would be advantageous
to
provide a simple, low cost method for detecting media width.

Current US Cross Reference Classification - CCXR (1):
   347/37

L Number	Hits	Search Text	DB	Time stamp
1	1	("6290349").PN.	USPAT; US-PGPUB	2004/01/13 14:27
2	1	("3990670").PN.	USPAT; US-PGPUB	2004/01/13 15:10
3	1	("4074872").PN.	USPAT; US-PGPUB	2004/01/13 15:10
-	178	347/104 and (print$4 with vertical)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 16:07
-	52	347/105 and (print$4 with vertical)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 15:10
-	33	(347/105 and (print$4 with vertical)) not (347/104 and (print$4 with vertical))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 15:05
-	80	347/101 and (print$4 with vertical)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 16:54
-	51	(347/101 and (print$4 with vertical)) not (347/104 and (print$4 with vertical))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 15:10
-	40	((347/101 and (print$4 with vertical)) not (347/104 and (print$4 with vertical))) not (347/105 and (print$4 with vertical))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 15:10
-	20	347/109 and (print$4 with vertical)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 15:23
-	19	(347/109 and (print$4 with vertical)) not (347/104 and (print$4 with vertical))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 15:23
-	19	((347/109 and (print$4 with vertical)) not (347/104 and (print$4 with vertical))) not (347/105 and (print$4 with vertical))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 15:24
-	0	((((347/109 and (print$4 with vertical)) not (347/104 and (print$4 with vertical))) not (347/105 and (print$4 with vertical))) not (347/101 and (print$4 with vertical))) not (347/109 and (print$4 with vertical))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 15:24
-	18	(((347/109 and (print$4 with vertical)) not (347/104 and (print$4 with vertical))) not (347/105 and (print$4 with vertical))) not (347/101 and (print$4 with vertical))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 15:30
-	2518	400/$.ccls. and (print$4 with vertical)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 16:13
-	139	400/$.ccls. and (vertical adj print$4)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 16:17

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–	139	(400/$.ccls. and (vertical adj print$4)) not (347/104 and (print$4 with vertical))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 15:32
–	139	((400/$.ccls. and (vertical adj print$4)) not (347/104 and (print$4 with vertical))) not (347/105 and (print$4 with vertical))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 15:32
–	138	(((400/$.ccls. and (vertical adj print$4)) not (347/104 and (print$4 with vertical))) not (347/105 and (print$4 with vertical))) not (347/101 and (print$4 with vertical))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 15:32
–	138	((((400/$.ccls. and (vertical adj print$4)) not (347/104 and (print$4 with vertical))) not (347/105 and (print$4 with vertical))) not (347/101 and (print$4 with vertical))) not (347/109 and (print$4 with vertical))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 15:32
–	53	347/108 and (print$4 with vertical)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 16:08
–	39	(347/108 and (print$4 with vertical)) not (347/104 and (print$4 with vertical))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 16:08
–	39	((347/108 and (print$4 with vertical)) not (347/104 and (print$4 with vertical))) not (347/105 and (print$4 with vertical))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 16:08
–	37	(((347/108 and (print$4 with vertical)) not (347/104 and (print$4 with vertical))) not (347/105 and (print$4 with vertical))) not (347/101 and (print$4 with vertical))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 16:08
–	32	((((347/108 and (print$4 with vertical)) not (347/104 and (print$4 with vertical))) not (347/105 and (print$4 with vertical))) not (347/101 and (print$4 with vertical))) not (347/109 and (print$4 with vertical))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 16:08
–	32	(((((347/108 and (print$4 with vertical)) not (347/104 and (print$4 with vertical))) not (347/105 and (print$4 with vertical))) not (347/101 and (print$4 with vertical))) not (347/109 and (print$4 with vertical))) not (400/$.ccls. and (vertical adj print$4))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 16:09
–	2721	347/$.ccls. and (print$4 with vertical)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 16:17
–	126	347/$.ccls. and (vertical adj print$4)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 16:38
–	120	(347/$.ccls. and (vertical adj print$4)) not (347/104 and (print$4 with vertical))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 16:18

–	125	(347/$.ccls. and (vertical adj print$4)) not (347/105 and (print$4 with vertical))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 16:18
–	119	((347/$.ccls. and (vertical adj print$4)) not (347/104 and (print$4 with vertical))) not (347/105 and (print$4 with vertical))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 16:18
–	114	(((347/$.ccls. and (vertical adj print$4)) not (347/104 and (print$4 with vertical))) not (347/105 and (print$4 with vertical))) not (347/101 and (print$4 with vertical))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 16:18
–	114	((((347/$.ccls. and (vertical adj print$4)) not (347/104 and (print$4 with vertical))) not (347/105 and (print$4 with vertical))) not (347/101 and (print$4 with vertical))) not (347/109 and (print$4 with vertical))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 16:19
–	92	(((((347/$.ccls. and (vertical adj print$4)) not (347/104 and (print$4 with vertical))) not (347/105 and (print$4 with vertical))) not (347/101 and (print$4 with vertical))) not (347/109 and (print$4 with vertical))) not (400/$.ccls. and (vertical adj print$4))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 16:19
–	90	101/$.ccls. and (vertical$4 adj print$4)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 16:40
–	70	(101/$.ccls. and (vertical$4 adj print$4)) not (400/$.ccls. and (vertical adj print$4))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 16:40
–	70	((101/$.ccls. and (vertical$4 adj print$4)) not (400/$.ccls. and (vertical adj print$4))) not (347/108 and (print$4 with vertical))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 16:40
–	70	(((101/$.ccls. and (vertical$4 adj print$4)) not (400/$.ccls. and (vertical adj print$4))) not (347/108 and (print$4 with vertical))) not (347/$.ccls. and (vertical adj print$4))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 16:41
–	10	347/101 and print$4 and (feed$4 with straight)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/01/09 17:01
–	20	(("6405055") or ("6360174") or ("5444192") or ("5446783") or ("6119931") or ("5110226") or ("6312124") or ("5447442") or ("6241351") or ("6467688") or ("6326097") or ("6417913") or ("5848401") or ("5593236") or ("5501535") or ("5240334") or ("5542487") or ("6219227") or ("6091514") or ("5802420")).PN.	USPAT; US-PGPUB	2003/01/09 17:27
–	1	("5731829").PN.	USPAT; US-PGPUB	2003/01/09 17:27
–	1	("5731829").PN.	USPAT; US-PGPUB	2003/01/10 14:34
–	1	("6405055").PN.	USPAT; US-PGPUB.	2003/01/10 14:34
–	394	(347/101).CCLS.	USPAT; US-PGPUB	2003/06/17 13:43

-	657	(347/101).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/06/17 13:49
-	788	(347/104).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/06/17 13:58
-	834	(347/105).CCLS.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/06/17 14:03
-	884	347/101	USPAT; US-PGPUB	2003/06/17 15:19
-	490	347/101 not ((347/101).CCLS.)	USPAT; US-PGPUB	2003/06/17 14:03
-	406	347/108	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/06/17 14:12
-	2330	101/$.ccls. and (print$4 with vertical)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/06/17 15:36
-	55	101/$.ccls. and (vertical adj print$4)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/06/17 15:37
-	1	347/101 and (photoconductive adj drum$2)	USPAT; US-PGPUB	2003/06/17 15:20
-	450	347/$.ccls. and (photoconductive adj drum$2)	USPAT; US-PGPUB	2003/06/17 15:21
-	2	347/$.ccls. and ((photoconductive adj drum$2) with (inkjet or ink adj jet))	USPAT; US-PGPUB	2003/06/17 15:31
-	140	347/$.ccls. and ((photoconductive adj drum$2) with (laser with scan$4))	USPAT; US-PGPUB	2003/06/17 15:31
-	2566	400/$.ccls. and (print$4 with vertical)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/06/17 15:36
-	140	400/$.ccls. and (vertical adj print$4)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/06/17 15:37
-	1	("5929894").PN.	USPAT; US-PGPUB	2003/06/17 16:18
-	244	((hook$2 or (support$4 adj bracket$2)) with vertical with wall with pivot$4)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/12/05 19:40
-	17	((hook$2 or (support$4 adj bracket$2)) with vertical with wall with pivot$4 with hang$4)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/12/05 18:21
-	227	(((hook$2 or (support$4 adj bracket$2)) with vertical with wall with pivot$4)) not (((hook$2 or (support$4 adj bracket$2)) with vertical with wall with pivot$4 with hang$4))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/12/05 18:21

-	7	((hook$2 or (support$4 adj bracket$2)) with hang$4 with parapet)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/12/05 19:40
-	1	("6464317").PN.	USPAT; US-PGPUB	2003/12/08 15:33
-	124	(christmas with ornament) with (hang$4 or hook$2)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/13 09:46
-	201765	bracket$2 with (mount$4 or hang$4)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/13 09:55
-	37786	(bracket$2 with (mount$4 or hang$4)) same vertical	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/13 09:56
-	2517	((bracket$2 with (mount$4 or hang$4)) same vertical) and portable	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/13 09:57
-	1355	((bracket$2 with (mount$4 or hang$4)) with vertical) and portable	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/13 09:57
-	90	((bracket$2 with (mount$4 or hang$4)) with vertical) with portable	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/13 10:05
-	11395	((bracket$2 with (mount$4 or hang$4)) with vertical) and wall$2	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/13 10:06
-	3156	((bracket$2 with (mount$4 or hang$4)) with vertical with wall$2)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/13 10:06
-	406	((bracket$2 with (mount$4 or hang$4)) with vertical with wall$2 with pivot$5)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/13 10:06
-	405	(((bracket$2 with (mount$4 or hang$4)) with vertical with wall$2 with pivot$5)) not (((bracket$2 with (mount$4 or hang$4)) with vertical) with portable)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/13 10:39
-	36	B41J002/01 and (bracket$2 with (mount$5 or hang$4))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/13 10:46
-	4	B41J002/01 and (bracket$2 with pivot$4)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/13 10:45
-	1	B41J029/13 and (bracket$2 with pivot$4)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/13 10:45

-	9	B41J002/01 and (bracket$2 same pivot$4)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/13 10:45
-	4	B41J029/13 and (bracket$2 with (mount$5 or hang$4))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/13 12:04
-	30	347/$.ccls. and (media with size with inch$2)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/13 12:14
-	12	347/$.ccls. and (media with standard with inch$2)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/13 12:14
-	9	(347/$.ccls. and (media with standard with inch$2)) not (347/$.ccls. and (media with size with inch$2))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2004/01/13 13:52